REMARKS

Claims 1-10 are pending in the instant application. Claims 1, 3-4, and 6-10 have been amended herewith. Claims 2 and 5 have been cancelled without prejudice or disclaimer. The specification has been amended to correct grammatical and typographical errors. Support for these amendments can be found at least on pages 52-53 and 64-89. Applicants respectfully submit that no new matter has been added by way of this amendment. A copy of the version with markings to show changes made to the amended specification and claims is attached in the Appendix.

Claims 1-10 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2-3, 5-6 will be objected to under 37 C.F.R. § 1.75 as being a substantial duplicate thereof if Claims 1 and 4 are found allowable. Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sasamoto (5,262,526). Claims 1-10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sugihara. Claims 4-6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Dietrick-Buchecker. Claims 1-3, 7, and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Juda (3,951,833).

Rejection under 35 U.S.C. § 112

Claims 1-10 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse the rejection and request withdrawal of the same.

Applicants respectfully submit that the rejections are moot in view of this amendment. Claims 1, 4, 7 and 8 have been amended to delete "general" from before the term "formula." Claims 7 and 9 have been amended to use a consistent set of nomenclature as recommended by the Examiner (Applicants presume that the Examiner meant Claim 9 and not Claim 8 for this particular rejection). Claims 8 and 10 have been amended to more clearly recite the invention.

Claims 1 and 4 have been amended to recite, among other things, that "R^1 and R^2 may be the same or different and independently represent a hydrocarbon group" and that "Ar^1 and Ar^2 may be the same or different and independently represent an aryl group," respectively.

Applicants respectfully request withdrawal of the 35 U.S.C. § 112, second paragraph rejection of Claims 1-10.

Objections under 37 C.F.R. §1.75

Claims 2-3, 5-6 will be objected to under 37 C.F.R. § 1.75 as being a substantial duplicate thereof if Claims 1 and 4 are found allowable.

Applicants respectfully submit that the objection has been rendered moot in light of the instant amendment. Claims 1, 3-4, and 6 have been amended to recite an electroluminescent device. Claims 1 and 4 are independent and Claims 3 and 6 further limit the recitations of Claims 1 and 4 respectively. Claims 2 and 3 have been cancelled without prejudice or disclaimer. Applicants request withdrawal of the 37 C.F.R. § 1.75 objection.

Rejections under 35 U.S.C. § 102

Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sasamoto. Applicants respectfully traverse the rejection and request withdrawal of the same.

Claim 1 recites, among other things, that it is non-nitrogen containing. Out of the 178 compounds shown, none contains nitrogen. Thus there is a basis for excluding nitrogen based compounds. Applicants respectfully submit that Claim 1 is patentable over Sasamoto *et al.*

Claim 2 has been cancelled without prejudice or disclaimer.

Claim 3 depends from independent Claim 1. When the recitations of Claim 3 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claim 3 is likewise patentable over Sasamoto *et al.*

Claims 1-10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sugihara. Applicants respectfully traverse the rejection and request withdrawal of the same.

Claim 1 has been recited above.

The Abstract of Sugihara *et al.* teaches the preparation of 1,10-phenanthroline derivatives and 4,7-dephenyl-1,10-phenanthroline derivatives as neutral carriers for ion-selective electrodes. More particularly, the Abstract of Sugihara *et al.* discloses 2,9-dibutyl-4,7-diphenyl-1,10-phenanthroline. The Abstract of Sugihara *et al.* does not teach or suggest that its compound can be derived from Lithiated R groups. Applicants respectfully submit that Claim 1 is patentable over the Abstract of Sugihara *et al.*

Claim 2 has been cancelled without prejudice or disclaimer.

Claim 3 depends from independent Claim 1. When the recitations of Claim 3 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claim 3 is likewise patentable over the Abstract of Sugihara *et al.*

Claim 4 recites, among other things, "an organic electroluminescent device comprising an organic layer having a luminescent region provided between an anode and a cathode, wherein said organic layer comprises a bathophenanthroline compound of formula (II)."

The Abstract of Sugihara *et al.* has been described above. The Abstract of Sugihara *et al.* does not teach or suggest that the compound can be made from lithiated R groups since that it is not expressly taught in the bare abstract. Applicants respectfully submit that Claim 4 is patentable over the Abstract of Sugihara *et al.*

Claim 5 has been cancelled without prejudice or disclaimer.

Claim 6 depends from independent Claim 4. When the recitations of Claim 6 are considered in combination with the recitations of Claim 4, Applicants respectfully submit that Claim 6 is likewise patentable over the Abstract of Sugihara *et al.*

Claims 7-10 recite, among other things, a process for preparing a bathophenanthroline compound. For the same reasons above, the Abstract of Sugihara *et al.* does not teach or suggest the processes for preparing a bathophenanthroline compound as recited in Claims 7-10. If an abstract of a printed publication is relied upon in a rejection under 35 U.S.C. 102, "only the text of the abstract (and not the underlying document) may be relied upon to support the rejection." M.P.E.P. §2128. Applicants submit that Claims 7-10 are patentable over the Abstract of Sugihara *et al.* To this end, the Examiner is requested to distinctly point out where in the Abstract the starting materials of lithiated R groups are found.

Claims 4-6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Dietrick-Buchecker. Applicants respectfully traverse the rejection and request withdrawal of the same.

Claim 4 has been recited above.

Dietrick-Buchecker teach interlocked macrocyclic ligands. Dietrick-Buchecker discloses a substituted-4,7-di-phenyl phenanthroline. Dietrick-Buchecker does not teach or suggest a bathophenanthroline compound of formula (II) as recited in Claim 4.Applicants respectfully submit that Claim 4 is patentable over Dietrick-Buchecker.

Claim 5 has been cancelled without prejudice or disclaimer.

Claim 6 depends from independent Claim 4. When the recitations of Claim 6 are considered in combination with the recitations of Claim 4, Applicants respectfully submit that Claim 6 is likewise patentable over Dietrick-Buchecker.

Applicants respectfully request withdrawal of the 35 U.S.C. § 102(b) rejection of Claims 1-8.

Rejection under 35 U.S.C. §103

Claims 1-3, 7, and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Juda (3,951,833). Applicants respectfully traverse the rejection and request withdrawal of the same.

Claim 1 has been recited above.

Juda teaches a method for preserving certain organic fluids wherein an inhibitory amount of a selected 1,10-phenanthroline is incorporated in such fluids as a biocide. Juda does not teach or suggest the claims as now amended to include lithiated R group starting materials nor non-nitrogen containing compounds. Applicants respectfully submit that Claim 1 is patentable over Juda.

Claim 2 has been cancelled without prejudice or disclaimer.

Claim 3 depends from independent Claim 1. When the recitations of Claim 3 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that Claim 3 is likewise patentable over Juda.

Claim 7 recites, among other things, a process for preparing a bathophenanthroline compound comprising subjecting a lithium compound of formula (III) and bathophenanthroline of formula (IV) to nucleophilic substitution reaction to obtain a bathophenanthroline compound of formula (I). Juda does not teach or suggest the processes for preparing a bathophenanthroline compound of formula (I) as recited in Claim 7. Applicants respectfully submit that Claim 7 is patentable over Juda.

Claim 8 depends from independent Claim 7. When the recitations of Claim 8 are considered in combination with the recitations of Claim 7, Applicants respectfully submit that Claim 8 is likewise patentable over Juda.

Applicants request withdrawal of the 35 U.S.C. §103 rejection of Claims 1-3, 7 and 8.

CONCLUSION

Applicants request prompt and favorable consideration of now pending Claims 1, 3-4, and 6-10.

Respectfully submitted,

SONNENSCHEIN NATH & ROSENTHAL

24 January 2002

By: _____
Shashank Upadhye, Reg. No. 48,209

SONNENSCHEIN NATH & ROSENTHAL
P.O. Box #061080
Wacker Drive Station
Sears Tower
Chicago, IL 60606-6404
(312)876-8000

I hereby certify that this document and any being referred to as attached or enclosed is being deposited with the United States Postal Service as first class mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231, on

1/24/02 _____
Date JoEllen Hogan

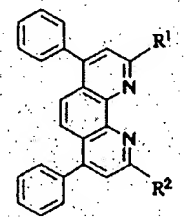
APPENDIX

In the Specification

The paragraph abridging pages 9 and 10 has been amended as follows:

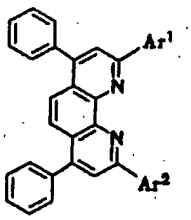
--According to an aspect of the invention, there is provided a bathophenanthroline compound of the following general formula (I) or (II)

General Formula (I):



wherein R^1 and R^2 may be the same or different and independently represent a [linear, branched or cyclic, saturated or unsaturated hydrocarbon group, or a substituted or unsubstituted, saturated or unsaturated] hydrocarbon group provided that at least one of R^1 and R^2 has at least two carbons, or

General Formula [II]:



wherein Ar^1 and Ar^2 may be the same or different and independently represent [a substituted or unsubstituted] an aryl group. The hydrocarbon group may be linear, branched or cyclic, saturated or unsaturated, or substituted or unsubsituted. Further, the aryl group may also be substituted or unsubstituted.--

The paragraph abridging pages 11-12 has been amended as follows:

--According to another aspect of the invention, there is also provided a process for preparing a bathophenanthroline compound[, which] comprising subjecting a lithium compound of the following general formula (III) or (V)

General Formula (III):

$[R^3]$ $\underline{R^1}$-Li or $[R^4]$ $\underline{R^2}$-Li

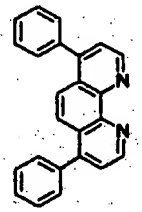
wherein $[R^3]$ $\underline{R^1}$ and $[R^4]$ $\underline{R^2}$ may be the same or different and independently represent a [linear, branched or cyclic, saturated or unsaturated hydrocarbon group or a substituted or unsubstituted, saturated or unsaturated] hydrocarbon group provided that at least one of $[R^3]$ $\underline{R^1}$ and $[R^4]$ $\underline{R^2}$-has at least two carbon atoms, or

General Formula (V):

$[Ar^3]$ $\underline{Ar^1}$-Li or $[Ar^4]$ $\underline{Ar^2}$-Li

wherein $[Ar^3]$ $\underline{Ar^1}$ and $[Ar^4]$ $\underline{Ar^2}$ may be the same or different and independently represent [a substituted or unsubstituted] an aryl group, and bathophenanthroline of the following structural formula (IV)

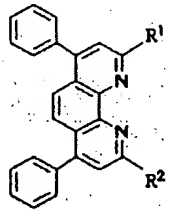
Structural Formula (IV):



to nucleophilic substitution reaction to obtain a bathophenanthroline compound of the afore-indicated formula (1) or (II). The hydrocarbon group may be linear, branched or cyclic, saturated or unsaturated, or substituted or unsubsituted. Further, the aryl group may also be substituted or unsubstituted.--

In the Claims

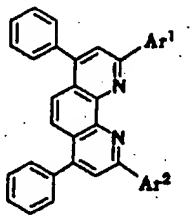
1. (Amended) A bathophenanthroline compound of [the following general] formula (I) [General Formula (I)]:



wherein R^1 and R^2 [is] are non-nitrogen containing and are derived from R^1-Li and R^2-Li respectively, and may be the same or different and independently represent a [linear, branched or cyclic, saturated or unsaturated hydrocarbon group, or a substituted or unsubstituted, saturated or unsaturated] hydrocarbon group provided that at least one of R^1 and R^2 has at least two carbons.

3. (Amended) A bathophenanthroline compound according to Claim [2]1, wherein said organic layer [consists of] comprises a carrier transport layer.

4. (Amended) A bathophenanthroline compound of [the following general] formula (II) [General Formula (II)]:



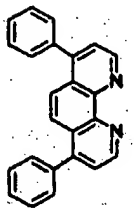
wherein Ar^1 and Ar^2 may be the same or different and independently represent [a substituted or unsubstituted] an aryl group, but do not form an interlocking macrocyclic compound.

6. (Amended) A bathophenanthroline compound according to Claim 5, wherein said organic layer [consists of] comprises a carrier transport layer.

7. (Amended) A process for preparing a bathophenanthroline compound[, which] comprising subjecting a lithium compound of [the following general] formula (III)
[General Formula (III)]:

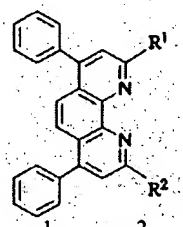
[R^3] R^1 -Li or [R^4] R^2-Li

wherein [R^3] R^1 and [R^4] R^2 may be the same or different and independently represent a [linear, branched or cyclic, saturated or unsaturated hydrocarbon group or a substituted or unsubstituted, saturated or unsaturated] hydrocarbon group provided that at least one of [R^3] R^1 and [R^4] R^2-has at least two carbon atoms, and bathophenanthroline of [the structural] formula (IV)
[Structural Formula (IV)]:



to nucleophilic substitution reaction to obtain a bathophenanthroline compound of [the general] formula (1)

[General Formula (I)]:



[wherein R^1 and R^2 may be the same or different and independently represent a linear, branched or cyclic, saturated or unsaturated hydrocarbon group, or a substituted or unsubstituted, saturated or unsaturated hydrocarbon group provided that at least one of R^1 and R^2 has at least two carbon atoms].

8. (Amended) A process according to Claim 7, wherein [said nucleophilic substitution reaction is carried out in such a way that] a carbanion is generated from said lithium compound in a solution and reacted with said bathophenanthroline during said nucleophilic substitution reaction.

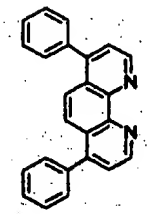
9. (Amended) A process for preparing a bathophenanthroline compound[, which] comprising subjecting a lithium compound of [the following general] formula (V)

[General Formula (V)]:

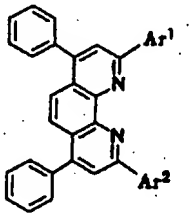
[Ar^3] Ar^1-Li or [Ar^4] Ar^2-Li

wherein [Ar^3] Ar^1 and [Ar^4] Ar^2 may be the same or different and independently represent [a substituted or unsubstituted] an aryl group, and bathophenanthroline of [the following structural] formula (IV)

[Structural Formula (IV)]:



to nucleophilic substitution reaction to obtain a bathophenanthroline compound of [the general] formula (2)
[General Formula (2)]:



[wherein Ar^1 and Ar^2 may be the same or different and independently represent a substituted or unsubstituted aryl group].

10. (Amended) A process according to Claim 9, wherein [said nucleophilic substitution reaction is carried out in such a way that] a carbanion is generated from said lithium compound in a solution and reacted with said bathophenanthroline during said nucleophilic substitution reaction.